United States Court of Appeals

for the Second Circuit

RESPONDENT'S BRIEF

NO. 77-4157

Corrected

IN THE
UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

No. 77-4157

NATURAL RESOURCES DEFENSE COUNCIL, INC.,

Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION
AND UNITED STATES OF AMERICA,

Respondents,

POWER AUTHORITY OF THE STATE OF NEW YORK, ET AL.,
AMERICAN ELECTRIC POWER COMPANY, ET AL.,
BOSTON EDISON COMPANY, ET AL.,
PENNSYLVANIA POWER & LIGHT COMPANY,

Intervenors.

ON PETITION FOR REVIEW OF A DECISION OF
THE UNITED STATES NUCLEAR REGULATORY COMMISSION

BRIEF FOR RESPONDENTS

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QUESTIONS PRESENTED

1. Where nuclear wastes are now stored in a manner consistent with the public health and safety and can be safely stored for decades to come, does the Atomic Energy Act nevertheless oblige the Commission to halt nuclear power plant licensing until the Commission makes a finding that nuclear wastes can be permanently disposed of safely?

2. Whether the Commission acted arbitrarily and capriciously in declining to conduct a rulemaking proceeding to make a determination about waste disposal which it was not obliged to make.

STATEMENT OF THE CASE

1. Nature of the Case

The Natural Resources Defense Council, Inc. ("NRDC") is seeking review of the Nuclear Regulatory Commission's ("NRC") denial of its rulemaking petition which sought a halt to nuclear power plant licensing until the Commission makes a finding that nuclear wastes can be permanently disposed of safely. It was the Commission's view, as explained more fully below, that power plant high level wastes can be, as they are now, stored in a manner consistent with the public health and safety until a permanent waste disposal facility is in operation; and that in passing the Atomic Energy Act, Congress did not intend that nuclear power plant licensing be postponed until a waste disposal facility was in operation, or until the safety of waste disposal was found to be assured.[1/] The Commission's order denying the rulemaking petition was issued June 27, 1977, and this petition for review followed.

1/ Both NRDC and the Commission defined high-level wastes to mean spent fuel rods and transuranic contaminated waste in addition to waste from reprocessing as defined in 10 CFR Part 50, Appendix F. See Record 4 and 507, App. 9 and 221. Throughout the brief our references to "waste" are meant to include all of these; our references to "waste disposal" or "waste disposal facility" refer to the long term permanent disposal of these high level wastes in a permanent facility.

This Court has jurisdiction pursuant to 28 U.S.C. 2342 and 42 U.S.C. 2239.

2. Statement of Facts

About 11% of the nation's electric power is currently provided by nuclear power plants. Nuclear wastes are the inevitable consequence of the operation of those plants. Record 3076, App. 328. The basic fuel for the plants is uranium 235 contained in pellets of uranium dioxide and encased in fuel rods placed in the reactor core. Record 3141, App. 331-3. When the uranium 235 nucleus fissions, energy is released and in the form of heat is used to make steam for generating electricity. Record 1289, App. 321-22. The splitting of the nucleus also produces highly radioactive materials, which build up throughout the fuel as the reactor operates and become the high level nuclear waste which was the subject of the NRDC petition.

When the fuel can no longer sustain an efficient chain reaction, i.e., when the fuel is "spent", it must be removed and replaced by fresh fuel. Record 1289, App. 322. The spent fuel and the wastes which can be separated from it contain significant amounts of radioactive material, and must remain properly shielded. Record 542, App. 317-318.

Without proper shielding radioactive materials pose a threat to human health because the energetic particles and rays emitted in radioactive decays can cause biological damage. The hazard associated with any particular radioactive material will depend both on the degree of activity and on the type of energy of the particles emitted, unalterable characteristics determined by the fundamental nuclear structure of the substance in question. 2/ For example, the highly penetrating gamma radiation characteristic of some fission products can be dangerous to persons who approach unshielded material containing these isotopes. Less penetrating types of emissions can also be hazardous

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2/ The unit of activity is the Curie. The greater the activity for a given amount of material, the shorter its half-life, that is, the time on the average in which half of the radioactive material will have decayed. Record 788, App. 320.

Radioactive emissions commonly include neutrons, alpha particles (helium nuclei), beta particles (electrons), and gamma rays. Because gamma rays and neutrons do not carry an electric charge and are therefore not so readily deflected by the charged particles present in the composition of all materials, neutrons and gamma rays are highly penetrating. This type of radiation poses the main health hazard from radioactive sources external to the human body. The light beta particle and the heavy alpha particle are charged and normally have relatively little penetrating power. Thus these emissions are a health hazard primarily in material that is readily ingested into the body, and retained by it. Record 2115, App. 324-5.

if the radioactive materials lodge in the body. The beta emission of Strontium-90, for example, is a threat to health because this material is attracted to bone. Likewise, alpha emitting plutonium-239, which remains hazardous for thousands of years, presents a potential carcinogenic danger because small particles of plutonium can lodge in the lungs. Record, 2134, App. 327.

Protection against the hazards of radioactive material is achieved by isolation and shielding until the activity has dropped to insignificant levels. Record 3140, App. 330. When spent fuel is removed from the reactor it is shielded by the corrosion resistant fuel rods themselves. Record 3787, App. 337. Nevertheless, the emitted radiation is intense at first, largely because of the high gamma activity of short-lived fission products. Record 3146, App. 336. For this reason and because the spent fuel is "hot" thermally as well as highly radioactive, the spent fuel is kept immersed in deep stainless-steel-lined heavily reinforced concrete pools filled with water, which serve as a coolant to dissipate the heat generated by radioactive decay and as a shield to absorb radiation from the fuel assemblies. Record 3791, App. 338. The radioactive material itself remains isolated from contact with the water by virtue of the construction of the fuel assemblies, bundles of long,

narrow tubes of corrosion resistant zirconium alloy entirely encasing the fuel material. Record 3140, App. 331. This alloy cladding prevents any significant escape of radioactive materials to the environment. Record 3787, App. 337.

After a cooling-down period of several months in the storage pools, the radioactivity in the spent fuel drops to a level at which the spent fuel could be conveniently transported in suitably designed canisters to other facilities for further storage, reprocessing, or disposal. 3/ Record 3787, App. 336. It is feasible, however, to leave

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3/ The expectation had been that spent fuel would be shipped to a separately licensed fuel reprocessing facility for separation and recovery of the usable fuel, both uranium and plutonium. Left over from reprocessing would be "high level waste", see 10 CFR Part 50, Appendix F, which would then be shipped to a Government-operated facility for long term management or disposal. At present, no reprocessing facilities are licensed to operate, no disposal facility exists, and reprocessing issues are under further study to consider nuclear fuel cycle alternatives to plutonium recycle. 13 Weekly Comp of Pres. Documents 506-507 (April 7, 1977). Most spent fuel is stored in spent fuel pools at reactor sites. Other storage facilities exist and are mainly used for nuclear wastes generated as a consequence of the U.S. nuclear weapons program. The volume of defense wastes greatly exceed that of the electric power industry. See generally, Hearings on Assessing the Policies, Plans, and Programs of the Executive Branch and the Nuclear Regulatory Commission for the Safe Storage and Disposal of Radioactive Wastes Produced in the Commercial Nuclear Fuel Cycle, Before the Subcommittee on Environment and Safety of the Joint Committee on Atomic Energy, 94th Cong., 2d Sess., pp. 26, 123-124 (1976).

the spent fuel in the on-site storage pools for many years to come. Record 3795, App. 341. [4/] The isolation and shielding provided by the pools, which are designed to provide protection for highly radioactive spent fuel freshly removed from the reactor, is more than adequate for continued safe storage at lower radiation levels. Record, 3791, App. 338-9. Storage capacity is being planned for up through the year 2000. [5/]

4/ See also In the Matter of Vermont Yankee Nuclear Power Station, 6 NRC 436, 440 (1977) ("Past experience has shown no corrosion problems after residence in fuel pools for over ten years. And calculations indicate that zircoloy's clad corrosion rate is sufficiently low to provide an adequate containment for at least 100 years.")

5/ For example, the Commission has already approved 19 of 32 applications for more compact on-site storage. Operating Units Status Report, NUREG-0020, Vol. 1, # 3, 3-6. The Commission has also approved a seven fold increase in fuel storage capacity at the General Electric storage facility at Morris, Illinois. Nuclear Energy's Dilemma: Disposing of Hazardous Radioactive Waste Safely, Report by the Comptroller General of the United States, EMD-77-41, 53 (1977). In addition, the Commission is presently reviewing a Stone and Webster Standardized spent fuel pool design [Docket--Project M-1]. If approved it would permit the construction of off-site spent fuel pools within three years of the choice of a site. The Commission is also reviewing the General Electric proposal to expand its facility at Morris by building an adjacent spent fuel pool which would increase the storage capacity by 150%. [Docket # 70-1308] Exxon also proposed the construction of a spent fuel pool as part of its application to build a reprocessing plant. Docket No. 50-564. However, now that reprocessing has been deferred indefinitely, no action has been taken on the application and Exxon has not yet separately reapplied for a permit to build the pool alone. On October 18, 1977, the Department of

(Continued on following page)

3. Administrative Proceedings

NRDC filed its petition for rulemaking with the Commission on November 18, 1976. The petition asserted that before a nuclear power plant could be licensed to operate, the Atomic Energy Act of 1954 obliged the Commission to determine "definitively" that the radioactive wastes created by the power reactor will be disposed of safely. The petition further asserted that doubt existed whether such a finding could be made, and asked that a rulemaking be convened for the purpose of determining whether the purported statutory finding could be made. Record, 1-19, App. 7-22. The NRDC filing included excerpts from earlier papers it had prepared as well as a recent report, which broadly examined the government's waste management activities over the years and recommended institutional changes to implement a better waste management program. Willrich, Radioactive Waste Management

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5/ (Continued from preceding page)

Energy announced its policy on spent fuel under which it has begun discussions with private industry to determine whether spent fuel storage facilities could be provided to the government on a contract basis. Utilities are being surveyed to provide an estimate of the amount and timing of spent fuel transfer to the government. If adequate private storage services cannot be provided, government storage facilities would be required. Press Release, DOE Announces New Spent Nuclear Fuel Policy (Oct. 18, 1977).

and Regulation, Record, 21-386, App. 24-200.

The Commission received a score of public comments on the NRDC petition, most taking issue with NRDC's reading of the Atomic Energy Act. In addition to reviewing these comments, the Commission specifically called upon its staff to analyze what basis there was for confidence that radioactive waste can be disposed of with a reasonable assurance of safety. After reviewing the large body of literature on the subject the staff concluded that the technology for high level waste disposal is reasonably available, that study indicated geologic disposal would be feasible and safe, and that at the President's direction there now existed an effective government program to develop and demonstrate by 1985 a disposal system for high level wastes. See generally Record 4512, 4521-27, App. 292, 300-306.

The system contemplated for demonstration by 1985 involves geologic disposal of the waste in bedded salt formations which are regarded as particularly favorable because of their evident stability for time periods well in excess of those required for radioactivity in power plant waste to decay to insignificant levels. Record 4527-29, App. 306-308. The staff explained that geologic evidence favors the view that a suitable site can be found:

> Forty-five of the forty-eight mainland states are associated with major [geologic salt] formations. During the current fiscal year, the NWTS [National

> Waste Terminal Storage] program will review the geologic records and conduct field investigations in thirteen of these states and conduct less intensive investigations in twenty-three other states. Given the large geographical area, the diverse rock types and the varying hydrological regimes, there is reason to believe that suitable sites can be identified. To date no site has been selected nor been judged suitable by either ERDA or the NRC.
>
> The objective of the NWTS program is to select sites for six nuclear waste repositories in different geologic formations by 1986. The first two sites will be identified and selected by the end of 1978. While no specific decision has been made as to the geologic formation or location, it is estimated that the first two repositories will be in salt because more information is currently available on salt than any other rock type.

In short, the staff thought it reasonable for the Commission to conclude that there existed a firm Government commitment to put a disposal facility in operation, that the technology for handling and burying the wastes existed, and that a suitable bedded salt site would be found. However, the staff was clear that "actual detailed designs [for a bedded salt depository] must await the development of site-specific properties of the disposal media and the overlying rock formations ...." Record 4530, App. 308. The staff summed up its position by stating that "[p]ending detailed review, it is likely that the wastes can be disposed of in a safe manner." Record 4534, App. 313.

4. The Commission's Denial of NRDC's Petition

The Commission ruled that it was not obliged to find that safe methods of high level waste disposal are available prior to the licensing of a reactor, and consequently denied NRDC's petition. At the same time, however, the Commission also concluded as a matter of policy that it "would not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely." This confidence it found in the accumulating evidence of those who had addressed the problem. Given the present methods of safe storage the Commission saw no reason to cease licensing reactors.

The Commission's opinion rested on its reading of the Atomic Energy Act of 1954, and its own regulations. At issue was what would give adequate protection for the public "health and safety" as used in Section 182(a) of the Atomic Energy Act, 42 U.S.C. 2232(a) and the Commission's regulations when licensing a nuclear power plant. 10 CFR Part 50, esp., 10 CFR 50.57(a). The Commission carefully considered NRDC's argument that since wastes were an inevitable byproduct of power plant operation the Commission must find that there then existed provision for their safe ultimate disposal as a precondition to licensing power plant operation. Record at 508, App. 222. This argument, in the Commission's view,

was inconsistent with the statutory scheme and at odds with the clear congressional understanding that power plant licensing could proceed with Government research efforts to place a disposal facility in operation.

The Commission explained that the "definitive" safety finding NRDC sought was one which the Atomic Energy Act and implementing regulations contemplated was to be made on the basis of detailed information about the particular facility sought to be licensed. "[D]etailed questions regarding the safety of permanent disposal of [high level] wastes are to be addressed in connection with the licensing of an actual high level waste disposal facility, rather than in connection with licensing of reactor operation." Record 509-510, App. 223-4 (Emphasis added)

This view of the statutory scheme did not mean that the radioactive hazards of nuclear wastes were not being given close attention. Rather, as the Commission noted (Record 508, App. 222):

> There is, we believe, a clear distinction between permanent disposal of wastes and their interim storage. The Commission must be assured that wastes generated by licensed power reactors can be safely handled and stored as they are generated. As part of the licensing process for an individual power reactor facility, the Commission does review the facility in question in order to assure that the design provides for safe methods for interim storage of spent nuclear fuel. But it is neither

necessary nor reasonable for the Commission to insist on proof that a means of permanent waste disposal is on hand at the time reactor operation begins, so long as the Commission can be reasonably confident that permanent disposal (as distinguished from continued surveillance) can be accomplished safely when it is likely to become necessary. Reasonable progress towards the development of permanent disposal facilities is presently being accomplished. Under these circumstances a halt in licensing of nuclear power plants is not required to protect public health and safety.

The Commission found persuasive support for its interpretation of the Atomic Energy Act and its policy, in Congress' awareness of the scope of the Commission's safety findings and Congress' intensive knowledge of the development of systems for high-level waste disposal. After reviewing the years of congressional scrutiny the Commission summarized its study of that history. Record 515-516, App. 229-31:

> [A]lmost from the beginning of the reactor licensing program the basic issue presented by the NRDC petition -- whether nuclear power reactors should be licensed in the absence of some "definitive" finding or conclusion that high-level wastes can be safely disposed of -- was also presented to the Congress. Congress is and has been aware of the high-level waste disposal problem, aware of its connection to reactor operations, and aware that the Commission does not plan to defer licensing until the problem is resolved.
>
> The question of continued licensing in the face of continued uncertainty respecting ultimate disposal technology is certainly a legitimate one to

present to the Congress. It must make its judgments, as we do, with an eye to known prospects for the future, programs for implementing them, and current assessments of the risk that what is thought likely to succeed will in fact succeed. This Commission recognizes its responsibility to keep the Congress aware of its information and projections on these matters and has done so in the past. The Commission has confidence given the on-going federal programs, that the problem of waste disposal will be solved. This confidence was supported by the Congress when it passed major legislation dividing the Atomic Energy Commission into separate agencies and provided for NRC licensing of ERDA waste management facilities.

At that time, it did not order a moratorium on reactor licensing and did not require that the Commission make specific findings with regard to high-level waste disposal in reactor licensing proceedings.

* * *

Such a course of conduct reinforces the conclusion reached above, ... that the Commission is not required to make a finding that radioactive wastes can be disposed of safely prior to the issuance of an operating license for a reactor.

The Commission's opinion concluded with a review of the Federal program for development of "an actual disposal facility." It concluded, as had its staff, that there was now a firm Government commitment, at Presidential direction, to place a waste disposal facility in operation within the next decade. Record 521, App. 235-6.

SUMMARY OF ARGUMENT

The petition for review presents a single overarching question -- whether the Nuclear Regulatory Commission is obliged by the Atomic Energy Act to postpone the licensing of power reactors until it finds that nuclear wastes can be disposed of safely.

We think that Congress already has answered that question in the negative. For years Congress has been intensively aware of the nuclear waste disposal issue, and has enacted fundamental legislation restructuring the country's regulation of nuclear power with the express recognition that a disposal facility did not exist, and without requiring a safety finding as to waste disposal. Quite recently Congress has generously funded a co-ordinated federal program to place a disposal facility in operation by 1985. It beggars belief to claim that the waste disposal issue has gone unnoticed. And it is fair to say that Congress has proceeded on the assumption that the Commission could continue to license power plants pending operation of a disposal facility upon finding that wastes can be safely stored.

The Atomic Energy Act contemplates that detailed questions regarding the disposal of nuclear wastes are to be

addressed in connection with the licensing of an actual waste disposal facility. Even if the question were ambiguous, it is basic that the Commission's reading of its governing statute should prevail, especially when it is giving meaning to a consistently held interpretation of a general statutory standard. The Commission's interpretation of its statute is a responsible one. There is ample lead time for putting a disposal facility in operation consistent with the public health and safety. Storage of spent fuel in pools on site has gone on for years without untoward effect and could continue safely for decades to come.

Finally, there was no requirement for an evidentiary hearing on the NRDC petition. All that was required was for the Commission to state its reasons for denying the petition, and this it did in full compliance with the Administrative Procedure Act. 5 U.S.C. 555(e). In any event NRDC's hearing request was premised on what it took as the need for a statutory finding now that waste can be disposed of safely, and falls with that premise. Given the continued public scrutiny which the waste disposal issue is already receiving, the Commission did not act arbitrarily or capriciously in denying NRDC's petition.

ARGUMENT

I. THE COMMISSION PROPERLY CONSTRUED THE ATOMIC ENERGY ACT IN RULING THAT NUCLEAR POWER PLANT LICENSING WAS NOT DEPENDENT UPON A PRIOR FINDING THAT NUCLEAR WASTES CAN BE DISPOSED OF SAFELY

A. The Commission Gave A Permissible Reading To Its Health And Safety Mandate

The fundamental dispute in this case revolves about what the Commission should find is necessary to achieve its statutory objective to provide adequate protection for the public health and safety when licensing a nuclear power plant for operation.

The Atomic Energy Act in Section 182(a), 42 U.S.C. 2232(a) states that a utility's application for a nuclear power plant operating license is to contain whatever information the Commission deems necessary:

> to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public. (emphasis added)

In implementing regulations, the Commission has reiterated that a nuclear power plant operating license may be issued only upon a finding that (10 C.F.R. 50.57(a)(3)):

> There is reasonable assurance (i) that the activities authorized by the operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations in this chapter ....

Detailed regulations, design criteria, regulatory guides, and standard review plans, specify the kind of extensive information the Commission insists upon prior to licensing a nuclear power plant for operation. 6/ See generally, 10 CFR Part 50.

NRDC insists that the Act's public health and safety standard makes the issuance of power plant operating licenses dependent upon a finding that the wastes generated by those plants will be disposed of safely. 7/ But that is far from a necessary reading of the statutory phrase. The Commission's opinion explained that the structure of the Atomic Energy Act contemplates that detailed questions resolving the safety of permanent disposal of high level wastes are to be addressed in connection with the licensing of an actual high-level

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6/ We are lodging with this Court that portion of a typical multi-volume Final Safety Analysis Report which relates to the storage of spent fuel on site so that the Court may have some appreciation of the information the Commission requires prior to licensing power plant operation.

7/ NRDC's rulemaking petition and its Brief are somewhat in conflict on this. Its rulemaking petition claimed at one point that a waste disposal facility must be in operation prior to licensing a power reactor -- "the absence of an acceptably safe plan and means for disposal" constitutes an undue risk to the public health and safety. Record 13, App. 18. (emphasis added). NRDC's Brief argues that a definitive finding on waste disposal safety must be made prior to issuing an operating license for a reactor, not that the facility must be in operation. NRDC Brief, pp. 24, 33.

waste disposal facility rather than in connection with licensing of reactor operation. The Act does not impose an inflexible requirement for an all time solution to potential hazards at the time of power plant operation. See e.g., 42 U.S.C. 2133 and 2232.

Even if the Commission's reading of the Act were not the only permissible one, it is basic that an agency has a good deal of discretion in giving meaning to its statutory charter. So long as its construction is a reasonable one, it warrants judicial acceptance. See generally, Udall v. Tallman, 380 U.S. 1, 16 (1965); National Labor Relations Board v. Hearst Publications, 322 U.S. 111, 131 (1944). Indeed, in regulating the complexities of nuclear power, if anything the Commission has far broader discretion to settle upon a meaning of its basic health and safety charter. Northern Indiana Public Service Co. v. Porter County Chapter of the Izaak Walton League of America, Inc, 423 U.S. 12 (1975); Power Reactor Development Corp. v. Electrical Union, 367 U.S. 396, 408 (1961). The courts have often remarked that the regulatory scheme of the Atomic Energy Act is "virtually unique in the degree to which broad responsibility is reposed in the administering agency, free of close prescription of its charter as to how it shall proceed in achieving the statutory objectives." Siegel v. United States, 400 F.2d 778, 783

(D.C. Cir. 1968); see Union of Concerned Scientists v. AEC, 499 F.2d 1069, 1079 (D.C. Cir. 1974).

The Commission's reading of its health and safety mandate is a responsible one, consistent with effectuating the broad congressional objectives that the possible hazards of nuclear power be kept under close control. As the Commission's opinion detailed and as we have noted earlier, supra 5-6, 10-11, the possible hazards of nuclear wastes are very much an issue which is regulated prior to licensing a power plant for operation.

> The Commission must be assured that wastes generated by licensed power reactors can be safely handled and stored as they are generated. As part of the licensing process for an individual power reactor facility, the Commission does review the facility in question in order to assure that the design provides for safe methods for interim storage of spent nuclear fuel.

The Commission's judgment that that review mechanism provides reasonable assurance that the reactor's operation will be consistent with public health and safety should not be disturbed. The wastes in the form of spent fuel have been safely stored, they remain in storage pools where they can be held for decades to come (unlikely as that need might be), and the Commission is satisfied that disposal can be accomplished safely when it is likely to become necessary.

NRDC's insistence that reactor licensing be postponed until the Commission finds that high level waste can be disposed of safely, is at bottom a disagreement over how much uncertainty should be tolerated in reaching health and safety judgments. That is obviously a matter over which there can be and is considerable disagreement. 8/ But Congress has entrusted the Commission to resolve those conflicts. 9/ As the Supreme Court emphasized in Power Reactor Development Co. v. Electrical Union, supra at 404 "[T]he responsibility for safeguarding [the public's] health and safety belongs under the

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8/ NRDC's contention has been raised before in individual facility licensing proceedings, and the Commission has consistently rejected its view. See e.g., In the Matter of Kansas City Gas and Electric Co. (Wolf Creek Generating Station, Unit No. 1), 1 NRC 618, 622-23 (1975); In the Matter of Project Management Corp. (Clinch River Breeder Reactor), 3 NRC 430, 442-443 (1976).

9/ As the D.C. Circuit put it in Union of Concerned Scientists v. AEC, supra at 1086,

> In order to hold the AEC abused its discretion, therefore, it would be necessary to find that the lack of unanimity among researchers and the absence of direct, as opposed to extrapolated, empirical support for the adequacy of ECCSs meeting the IAC clearly required the withholding of full-power licenses. That would effectively deprive the Commission of any discretion. Since unanimity among scientists, let alone empirical certainty, is rarely to be expected, it would substitute not even our, but the Union of Concerned Scientists', judgment for that of the AEC.

statute to the Commission." (Emphasis added). It is the Commision's daily business. The court's remarks in Nader v. Ray, 363 F. Supp. 946, 954 (D.D.C. 1973) are also pertinent here:

> Absolute certainty or "complete," "entire," or "perfect" safety is not required by the Atomic Energy Act, nor does nuclear safety technology admit of such a standard. Power Reactor Development Co. v. Int'l Union Electrical Workers, supra; cf. Crowther v. Seaborg, 312 F. Supp. 1205, 1234 (D. Colo. 1970). The Supreme Court recognized in the Power Reactor case that nuclear technology is subject to change. 367 U.S. at 408, 81 S.Ct. 1529, 6 L.Ed.2d 924. What constitutes "reasonable assurance of adequate protection" is also subject to change, as the state of the nuclear safety art advances. Cf. Crowther v. Seaborg, supra. It is for the Commission to weigh the state of that art, the risk of accidents, the record of past performance, the need for further improvement in nuclear safety matters, and other considerations. Balancing these factors calls for the exercise of discretion by the expert agency . . . .

See also Nader v. NRC, 513 F.2d 1045, 1050-1052 (D.C. Cir. 1975); North Anna Environmental Coalition v. NRC, 533 F.2d 655, 667 (D.C. Cir. 1976).

Even if the propriety of the Commission's interpretation of its health and safety responsibilities were a more ambiguous question than we think it is, Congress' treatment of the waste disposal issue is persuasive support for the Commission's position. We turn to that now.

B. Congress Has Made Clear That Power Plant Licensing Is Not To Be Postponed Pending A Finding That Wastes Can Be Disposed Of Safely

Throughout the years and from the inception of power plant licensing Congress has reviewed the waste disposal question, virtually on an annual basis. Congress has been aware that a waste disposal facility does not exist, aware that there is therefore necessarily some uncertainty about the safe disposal of wastes, and aware as well that the absence of a proven waste disposal facility has been urged as a reason for postponing future power plant operations. Congress has chosen not to impose a moratorium on licensing, and not to require special findings on waste disposal as a condition of power plant licensing. Rather, it has heeded the clear consensus of thought that disposal of nuclear wastes is feasible, and together with the President has taken a leading hand in overseeing the creation of a coordinated program to establish a waste disposal facility by 1985.

1. The early history

Congress has been consistently informed of waste disposal issues first through annual hearings before the Joint Committee on Atomic Energy, and then beginning in 1975, through

hearings before other congressional committees as well.[10] When in 1954 Congress first authorized private entry into the newly emerging field of nuclear energy and private operation of nuclear power plants, Congress was alerted to the care required for handling spent fuel. From that earliest time it took the position that power plant licensing was not dependent upon a finding of safe waste disposal. Representative Dingell specifically raised the question of disposal during the House debates on the Atomic Energy Act of 1954.[11] (100 Cong. Rec. 14044-45 (Aug. 17, 1954)):

> MR. DINGELL: I just want to make an observation and ask a question of my distinguished friend from New York.
>
> * * *

10/ The Joint Committee on Atomic Energy was abolished in 1977, P.L. 95-110, 91 Stat. 884, and its jurisdiction over nuclear energy was transferred to a number of congressional committees.

11/ As originally enacted, Section 52 of the Atomic Energy Act of 1954 provided for federal ownership of all special nuclear material, so that reactor fuel was government property and, once used, the spent fuel was to be returned to a federal installation. This provision of the 1954 Act was amended in 1965 to allow for private ownership of nuclear fuel. (P.L. 88-489, 78 Stat. 602). It was assumed that spent fuel would be treated as a private, economic resource, reprocessed, and the wastes from the reprocessing operation disposed of on federal land. See 10 CFR Part 50, Appendix F. The licensing scheme of sections 103, 42 U.S.C. 2133, and 185, 42 U.S.C. 2235, was not affected by this change.

In the control and disposition of the unspent force in the tailings of fissionable material of the atom, what provisions are we making or what are we going to do about the final disposition of the unspent force of this fissionable material which remains, so to speak, in comparison with the ashes of coal, which is gotten from the atom after power is generated? They tell me that it will plague us for a thousand years.

MR. COLE. . . . [T]here are the radioactive wastes which are the unused end products of the controlled reaction. Ample provision is made in the bill for the Commission to protect the health and safety of the public. This, of course, includes adequate treatment of and control of these wastes.

The only thing I can assure the gentleman is that to date there have been no harmful consequences from this controlled reaction; and that is what the peacetime uses of atomic energy would involve. There have been no harmful effects. As a matter of fact, the health and safety record of the great atomic energy works up at Hanford far exceed the best of the industrial records in this country....

* * *

Mr. DINGELL. If these tailings are unspent and for that reason dangerous, is there not some means or method that should be found to spend them completely so that they will become absolutely harmless?

Mr. COLE of New York. I am not sure that I understand what the gentleman has in mind when he speaks of tailings that are not completely spent. Material which has been exposed to radiation is not altogether consumed in that process. That material, that waste material, is stored underground and eventually reworked.

Mr. DINGELL. Yes, but that is the final disposition of it, is it not?

Mr. COLE of New York. No; that is only temporary. Eventually it is reworked.

Mr. DINGELL. I think the American people are interested in that phase of the question, I will say to my distinguished friend.

By 1959, [12] with commmercial power plants under construction but not yet licensed for operation, the Joint Committee decided to hold extensive hearings devoted exclusively to the problem of radioactive waste disposal. "Industrial Radioactive Waste Disposal" Hearings before the Special Subcommittee on Radiadtion of the Joint Committee on Atomic Energy, Vols. I-V, 86th Cong., 1st Sess. (1959). There was at the time a considerable volume of high level waste which had been generated as a result of the military weapons program and was being stored in tanks at Hanford, Washington, and Savannah River, South Carolina. [13] The Atomic Energy Commission (AEC) described its waste storage practices at these facilities, [14] and the AEC's licensing

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[12] Although authorized to enter the nuclear field and to construct power reactors by the Atomic Energy Act of 1954 private companies hesitated until the Price-Anderson Act of 1957, 42 U.S.C. 2210, removed the impediment of unlimited liability for what was seen as the remote possibility of a major nuclear accident.

[13] Some military nuclear waste was solidified and stored at Idaho National Engineering Laboratory.

[14] 1959 Hearings on Industrial Radioactive Waste Disposal at 159-170, 428-460, 579-584, 598-609, 987-995.

program for commercial power plants.[15] A number of witnesses described the possible future problems implicated by the commercialization of nuclear power that was then only in its infancy. Id. at 7-32, 1825-1844, 2426-2438. That the wastes were an inevitable consequence of nuclear power operation and would increase with time was clearly recognized, and indeed was the principal fact that occasioned the hearings.[16] Representative Holifield remarked at the outset (Id. at 12):

> Representative HOLIFIELD. Our records show that Dr. Rodger, our consultant, wrote his first paper on this in 1943. Of course, at that time there was very little of this to be dealt with, but as the years have gone along and as these reactors have multiplied both from the weapons standpoint and the now encroaching power development reactor program, the problem becomes larger and larger, the gallonage of this material becomes greater and greater and the concentration of toxicity becomes greater.
>
> The public should know that the Atomic Energy Commission has been alerted to this problem and has been very diligent, in my opinion, in handling

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15/ Id. at 2509-2522. Witnesses from the AEC described their research on proposals for permanent waste disposal systems, including deep geologic isolation in abandoned salt mines and ocean disposal. Id. at 1825-1860, 2028-2041, 2087-2280, 2345-2358.

16/ See testimony of AEC witnesses, id. 458-459, 607-609, 989-991, and testimony of Dr. Wolman, Johns Hopkins University, id. at 10, 2428.

it on the only basis they know how to handle it, which is a temporary method of containment and custody.

They also should know this is a field where a permanent solution has not been found.

Thus, it is clear that from the very beginnings of commercial nuclear power the Congress was aware of the absence of a permanent waste disposal facility, but decided to proceed with power plant licensing.

2. Licensed Power Plant Operation

Since 1959 the question of waste disposal was reviewed by the Joint Committee almost on an annual basis. 17/

17/ Hearings on Development, Growth, and State of Atomic Energy Industry before the Joint Committee on Atomic Energy (JCAE), 87th Cong., 1st Sess. 15-16 (1961); Hearings on AEC Authorizing Legislation, Fiscal Year 1963, before the JCAE, 87th Cong., 2d Sess. 97-98 (1962); Hearings on AEC Authorizing Legislation, Fiscal Year 1964, before the JCAE, 88th Cong., 1st Sess. 32-40 (1963); Hearings on AEC Authorizing Legislation, Fiscal Year 1965, before the JCAE, Part I, 88th Cong., 2d Sess., 399-402 (1964); Hearings on AEC Authorizing Legislation, Fiscal Year 1966, before the JCAE, Part 2, 89th Cong., 1st Sess., 873-876, 1214-1220 (1965); Hearings on AEC Authorizing Legislation, Fiscal Year 1969, before the JCAE, Part 1, 90th Cong., 2d Sess., 704 (1968); Hearings on Environmental Effects of Producing Electric Power before the JCAE, 91st Cong., 1st Sess. Part 1, 122-123, 135-136 (1969); Hearings on AEC Authorizing Legislation, Fiscal Year 1970, before the JCAE, Part 1, 91st Cong., 1st Sess., 969-974, 1021-1028 (1969); Hearings on AEC Authorizing Legislation, Fiscal Year 1971, before the JCAE, Part 3, 91st Cong., 2d Sess. 1424-1428 (1970); Hearings on AEC Authorizing

(Continued on following page)

The Joint Committee was kept abreast of the AEC's waste management program, understood the measures that were being taken for storage of the wastes, and considered these measures adequate for the protection of the public health and safety. While the problems of waste disposal were the subject of constant and intensive concern, they were not thought of as immediate safety issues. Further, waste disposal issues were considered to be ones calling for long term research and study, and eventual solution. See generally, 1964 Hearings, at 399-400; 1965 Hearings at 873-876, 1214-1220; 1969 Hearings on AEC Authorizations at 1023; 1970 Hearings, at 1424-1427.

17/ (Continued from preceding page)

Legislation, Fiscal Year 1972, before the JCAE, 92d Cong., 1st Sess., Part 1, 1307-2235 (1971); Report of the JCAE, Nuclear Power and Related Energy Problems - 1968 through 1970, 92d Cong., 1st Sess. 299, 438-439 (1971); Hearings before the JCAE on Nuclear Reactor Safety, 93d Cong., 1st Sess., Part 1, 179-278, Part 2, 72, 86-88, 107-108 (1973); Hearings on Nuclear Power Plant Siting and Licensing before the JCAE 93d Cong., 2d Sess. 130, 567, 573 (1974); Hearings on Storage and Disposal of Radioactive Waste before the JCAE, 94th Cong., 1st Sess. 18 (1975); Hearings on Radioactive Waste Management before the Subcomm. on Environment and Safety of the JCAE, 94th Cong., 2d Sess. 20-21 (1976); Hearings on ERDA Authorizing Legislation, Fiscal Year 1977, before the Subcommittee on Legislation of the JCAE, 94th Cong., 2d Sess. Part 2, 1440-1444 (1976).

Hereafter, these hearings will be cited by reference to the year in which they were held. Thus, "1971 Hearings" would refer to Hearings on AEC Authorizing Legislation, Fiscal Year 1972 (1971).

As Congress monitored the slow progress toward a solution, it also was aware that there was some public support for the postponement of nuclear power operation pending resolution of the waste problem. In 1972, as a result of technical problems, the AEC cancelled plans to utilize a Lyons, Kansas salt mine to assess the effectiveness of bedded salt as a permanent disposal medium for high-level wastes. 18/

At the 1973 and 1974 Hearings, the Union of Concerned Scientists and other groups urged Congress, unsuccessfully, to halt further commercial power plant licensing pending resolution of the waste disposal issue. 1973 Hearings,

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18/ The technical problems arose from drillings in the salt formation by firms looking for oil, and from past salt mining practices. It was determined that there was a possibility that water might seep into the mine and leach out radioactive materials. S. Rep. No. 92-802, 92d Cong., 2d Sess. 11-12 (1972).

There was also political opposition to the AEC's handling of the Kansas project and to its handling of waste management generally. Representative Holifield responded:

> As far as saying the AEC has ignored the waste problem, it simply is not true. AEC has had ongoing programs, valued at many millions of dollars. Furthermore years have been devoted to this very problem, all under the aegis of this Committee.

1971 Hearings, supra at 1333. And see remarks of Chairman Pastore, id. at 1335-1336.

Part 2, 72-74, 86-89; [19] 1974 Hearings on Nuclear Powerplant Siting and Licensing, pp. 130, 567, 573. Instead, Congress asked the AEC to devote greater priority to waste management, [20] and did not see fit to postpone reactor licensing. It increased funding for waste management from $1.5 million for fiscal year 1972 [21] to $15 million in FY 1974 [22] and $28.6 million in 1975. The Joint Committee's statement accompanying the FY 1975 authorization again is clear that Congress did not view waste disposal as a matter which must be resolved as a condition to continued licensing of reactors.

19/ Representative Hosmer stated, 1973 Hearings at 107:

> I think it could be, at least in my mind, a little unreasonable to expect man to have invented everything that is inventable at this particular moment before he can move ahead with any activity. After all, the period I talked about, a little over 25 years for this accumulation of waste, is not too unmanageable to store in a manageable fashion. Still a volume of a 100 years should not be an unmanageable quantity.

20/ In 1971 and 1972 as well, the JCAE urged AEC to reorganize its waste management efforts to focus greater attention on them. See S. Rep. No. 92-249, 92d Cong., 1st Sess. 28-29 (1971); S. Rep. No. 92-802, 92d Cong., 2d Sess. at 11-12 (1972).

21/ See S. Rep. No. 92-249, supra.

22/ See S. Rep. No. 93-224, 93d Cong., 1st Sess. 9-10 (1973).

The Commssion's waste management program for fiscal year 1975 contemplates vigorous study and development of both the retrievable storage and geological disposal approaches. In view of the predictable rate of accumulation of radioactive waste from the civilian nuclear power program and the progress being made in solidifying and reducing waste volume, the committee recommends that the Commission place strong emphasis on the development of the retrievable storage concept. Successful interim use of this technique will allow ample time to investigate thoroughly ultimate disposal in geologic formations. (Emphasis added).

S. Rep. No. 93-773, 93d Cong., 2d Sess. 30 (1974). 23/

23/ As a response to the Lyons, Kansas events, the AEC developed a proposal to store wastes in a retrievable surface facility (RSSF) pending the development of geologic disposal sites. See 1973 Hearings, Part 1 at 179-278; S. Rep. No. 92-802. The RSSF proposal elicited a wide range of criticism, including criticism by EPA, which thought the approach inconsistent with a commitment to permanent waste disposal. See NUREG-0116, App. D, Record 801, Record 4520-21, App. 299-300. It was dropped in 1975 and attention again focused on geologic salt bed disposal. See S. Rep. No. 94-104, 94th Cong., 1st Sess. 10 (1975).

3. The Energy Reorganization Act of 1974

In the years since the 1959 Hearings the Atomic Energy Act has been amended several times without imposing a requirement that waste disposal be addressed in operating license proceedings. 24/ More recently, in the Energy Reorganization Act of 1974, 42 U.S.C. 5801, et seq., Congress fundamentally restructured the regulation of nuclear power by abolishing the AEC, establishing the NRC as successor to the licensing and related regulatory functions of the AEC, and placing the AEC's promotional functions with the Energy Research and Development Administration.

In passing the Energy Reorganization Act Congress specifically addressed the waste disposal issue by providing for NRC licensing of ERDA waste disposal facilities. Sections 202(3), (4), 42 U.S.C. 5842(3), (4). Congress recognized that these were facilities "not now in existence but [which] will be developed in the near future for long-term, possibly

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24/ See, e.g., Pub. Law 87-206 (75 Stat. 475) (1961) adding sec. 190, 42 U.S.C. 2240; Pub. Law 87-615 (76 Stat. 409) (1962) adding sec. 191, 42 U.S.C. 2241, amending sec. 189, 42 U.S.C. 2239; Pub. Law 88-489 (78 Stat. 602) (1964) amending sec. 184, 42 U.S.C. 2234; Pub. Law 91-560 (84 Stat. 1472) (1970) amending secs. 102-105, 42 U.S.C. 2132-2135; Pub. Law 92-807 (86 Stat. 191) (1972) adding sec. 192, 42 U.S.C. 2242.

permanent, storage of high-level radioactive wastes, including wastes from the licensed reactor," Conference Report, S. Rep. No. 93-1252, 93rd Cong., 2nd Sess. 34 (1974). Congress did not alter the commercial reactor licensing provisions of the Atomic Energy Act and did not impose any new requirement for special findings. It expected power plant licensing to continue and for wastes to be safely stored: 25/

> These two paragraphs [(3) and (4) of Section 202] anticipate the time, probably in the 1980's when commercial nuclear power reactors will generate more high level radioactive waste material than reactors in the Government sector, including those used in the weapons program. At present, most of the wastes which are leaking from temporary tanks in AEC storage facilities are from the weapons program. The committee intends that new facilities now being planned for long term storage of commercial wastes will meet strict licensing standards of [NRC]. S. Rep. No. 93-980, 93d Cong., 2d Sess. 60 (1974).

25/ Congress was again aware of requests to halt power plant licensing until waste disposal issues were solved. Hearing on S. 2744 before the Senate Subcommittee on Reorganization, Research and International Organization of the Senate Committee on Government Operations, 93rd Cong., 1st Sess. (1973), see particularly the prepared statement and testimony of Daniel F. Ford, Union of Concerned Scientists, at 210-215, 227; Hearings on S. 2135 and S. 2744 before the Subcommittee on Reorganization, Research and International Organization of the Senate Committee on Government Operations, 93rd Cong., 2nd Sess. (1974), testimony of Dr. Edward P. Redford, Johns Hopkins University, at 139, and prepared statements submitted by Sam Love, Environmental Action Foundation, at 141, and Anthony Z. Roisman, at 212. The AEC reply to these suggestions was to describe its proposals for long-term waste management and disposal and to suggest that a solution to the problem could be anticipated. Id. at 321-322.

See also H. Rep. 93-707, 93rd Cong., 1st Sess. 4-5 (1973); S. Rep. No. 93-980, supra at 19-20; In the Matter of Natural Resources Defense Council (Request Concerning ERDA High Level Waste Storage Facilities), 5 NRC 550 (1977).

4. Recent Congressional Consideration

Congressional scrutiny has not abated. ERDA's waste management plans and programs were reviewed at length in the course of 1975 Oversight Hearings on Nuclear Energy -- Overview of the Major Issues, before the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, 94th Cong., 1st Sess. at 1-2, 540-602, and in additional extensive hearings before the Joint Committee.[26/] In 1976 Congress approved funding of ERDA's program at a level five times that of the previous year, observing that it was vital that "firm decisions and actions be taken soon to close the back-end of the fuel cycle," including terminal storage for spent fuel, "or the future growth of nuclear power could be severely hampered." S. Rep. No. 94-762, 94th Cong., 2nd Sess. 13 (1976). ERDA did not minimize the effort required to put a disposal facility in operation

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26/ 1975 Hearings on Storage and Disposal of Radioactive Waste before the JCAE, supra, S. Rep. No. 94-104, 94th Cong., 1st Sess. 33-34 (1975).

noting that it would be a "heck of a big job" to identify and develop suitable disposal sites. [27/] And again, calls for a licensing moratorium were explicitly noted and rejected:

> Critics of nuclear power who call for a moratorium on nuclear power plants never mention the impact their actions would have on the consumer and the Nation. A moratorium would mean significantly higher power rates to the consumer, a massive drain on our balance of payments and a severe and detrimental impact on attaining the goal of energy independence and self sufficiency.

H.R. Rep. No. 94-1223, 94th Cong., 2nd Sess. 9-10 (1976).

In 1977 Hearings, Congress was advised that the American Physical Society, the National Academy of Sciences, the Ford Foundation, ERDA -- indeed the general consensus of knowledgeable people -- concurred in the judgment that nuclear waste can be handled safely and that disposal can be achieved by geologic emplacement. [28/] NRDC itself was "unaware of any reputable scientific study that concludes it cannot be done in principle" and was inclined to agree with the judgment of the

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27/ Hearings on Public Works for Water and Power Development and Energy Research Appropriations before a Subcommittee of the Senate Committee on Appropriations, 94th Cong., 2nd Sess., Part 5, 4325 (1976). See also Hearings on Public Works for Water and Power Development and Energy Research Appropriations before a Subcommittee of the House Committee on Appropriations, 94th Cong., 2nd Sess., Part 6, 365-366, 369-370, Part 7, 1150-51 (1976).

28/ Oversight Hearings on Nuclear Waste Management Before the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, 95th Cong., 1st Sess. at 15, 40, 24-25, 174-175 (May, 1977).

American Physical Society that the technological capabilities of waste disposal are within the present state of knowledge.[29] Failure, NRDC thought, was unlikely but possible, the greatest uncertainty being what it took to be an assumption that technology would be self-implementing.[30]

If such an assumption had existed, Congress and the agencies were doing the best to negate it. ERDA had modified its waste management program to conform with recent Presidential policy of indefinitely postponing reprocessing, it was continuing exploratory work on geologic emplacement, and was advancing its program for solidification and immobilization of wastes. Id. at 37, 195-197. The Environmental Protection Agency was holding workshops across the country to receive a broad range of views looking toward issuing waste disposal standards by mid-1978, and the Nuclear Regulatory Commission was in the process of developing detailed regulatory criteria for a waste disposal facility. Id. at 33-35, 131. There was in fact a co-ordinated federal waste disposal program. It was ERDA's responsibility to develop the technology, select the site, and operate the waste disposal facility. The Nuclear Regulatory Commission was responsible

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29/ Id. at 284, 78.

30/ Id., at 72, 284-286.

through its licensing power for setting detailed regulatory health, safety and environmental standards governing the design and operation of the ERDA facility and criteria regulating the form of waste to be shipped. EPA was responsible for establishing generally applicable environmental standards for the protection of the general environment from radioactive material. Id. at 27-28, 35, 102-103. (See Reorganization Plan No. 3 of 1970, 5 U.S.C. 901, Appendix.)

Later in 1977 Congress directly addressed the waste disposal situation when it enacted the Department of Energy Organization Act, 42 U.S.C. 7101 et seq., which reorganized for a second time the Federal energy bureaucracy without modifying the NRC's authority to license nuclear reactors. 31/ The legislative result was Section 203(8), 42 U.S.C. 7133(a)(8), which explicitly delineates the nuclear waste management authority of the Department of Energy.

31/ The testimony from the full day of hearings on the reorganization shows that Congress was aware that no waste disposal facility was yet at hand, but that the consensus was that it would be developed on time. In addition, the petition which is the subject of this suit and a California law, which requires the demonstration of waste disposal technology before the licensing in that State of any additional nuclear power reactors, were both discussed. Hearings on S. 826 and S. 591, Department of Energy Organization Act, before the Senate Committee on Governmental Affairs, 95th Cong., 1st Sess. 818-819, 831, 850, 867 (1977).

Senator Ribicoff, the manager of the bill, explained that no change was made in the Atomic Energy Act.[32] The function of 203(8) was to centralize responsibility for waste management within the Department of Energy so that it would assume the attention it deserved and so that Congress could directly oversee the handling of the nuclear waste problem.[33]

In summary, as the Commission's opinion noted in quoting from Power Reactor, supra at 409:

> It may often be shaky business to attribute significance to the inaction of Congress, but under these circumstances, and considering especially the peculiar responsibility and place of the Joint Committee in the statutory scheme, we think it fair to read this history as a de facto acquiescence in and ratification of the Commission's licensing procedure by Congress.

Congress has in fact not remained quiescent. It has been constant in its scrutiny of the federal waste management

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32/ 123 Cong. Rec. S7929 (Daily Digest, May 18, 1977).

33/ Id. at S7930-32 (remarks of Senators Glenn, Mathias and McClure). Several bills are pending in Congress which address the long-term waste disposal issue. H.R. 881 would impose a moratorium on nuclear licensing pending resolution of the waste disposal issue. H.R. 5376, H.R. 4867 and H.R. 5369 would give increased power to the States in decisions on a permanent waste repository. H.R. 9510 and H.R. 9499 would place all authority for waste management in either the NRC or some other independent waste management authority. H.R. 9852 would require a complete study of the nuclear fuel cycle, including waste management.

program for some twenty years, and fully aware of what has been done and what remains to be done.

While there is disappointment that a waste disposal facility is not yet in operation, Congress has consistently and explicitly refused to postpone reactor licensing pending special findings or operation of an actual disposal facility. It has adopted that course with assurance that present methods for storing commercial waste are consistent with the public health and safety, and on the conviction that a waste disposal facility can best be made a reality through a disciplined government program overseen by Congress. Petitioners are seeking from this Court a policy decision Congress has rejected.

II. THE COMMISSION'S DENIAL OF A HEARING WAS NOT ARBITRARY OR CAPRICIOUS

NRDC sought a hearing on its rulemaking petition for the sole purpose of determining whether nuclear wastes can be disposed of safely. Record 3, 17; App. 8, 22. Since the Commission was not legally obliged to make the finding NRDC sought, it follows that the Commission was not obliged to hold a hearing on the issue. Its denial, then, was not arbitrary or capricious.

The Administrative Procedure Act requires only "a brief statement of the grounds for denial" of a petition for rulemaking, 5 U.S.C. 555(e), and that was more than adequately afforded by the Commission's opinion here. The Commission explained the requirements of the Atomic Energy Act, traced the congressional consideration of waste disposal, called upon its staff to furnish an assessment of the basis for confidence that a waste disposal facility will be ready when needed, and explained the measures undertaken to provide for safe storage of nuclear wastes. Record 506-522; App. 220-236; see supra pp. 9-12. No more is required. A statement of reasons need only indicate the "determinative reason for the final action taken", Camp v. Pitts, 411 U.S. 138, 143 (1973) and that was plainly afforded.

Even where an agency denial more directly affects the immediate interests of a petitioner, the statement of reasons

is to have simply "the grounds of decision and the essential facts upon which the [agency's] inferences are based." Dunlop v. Bachowski, 421 U.S. 560, 574 (1975). Review "should be confined to examination of the reasons statement, and the determination whether the statement, without more, evinces that the [agency's] decision is so irrational as to constitute the decision arbitrary and capricious...." Clearly, the Commission's decision, which articulates its legal reasoning and sets forth the essential facts supporting its determination that public health and safety is adequately protected, satisfies that standard.

Finally, petitioner's National Environmental Policy Act argument is misplaced. We do not quarrel with the proposition that the Commission must assess the foreseeable impacts of nuclear wastes when licensing a power plant. The Commission does just that.[34/] But this is not a NEPA case, and was not

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34/ The Commission's consideration of the impacts from the entire uranium fuel cycle are traced in 41 Fed. Reg. 34707 (Aug. 16, 1976); 41 Fed. Reg. 45849 (Oct. 1976); 41 Fed. Reg. 49898 (Nov. 11, 1976); and 42 Fed. Reg. 13803 (March 14, 1977), and 42 Fed. REg. 26,987 (May 26, 1977), which responded to the court of appeals decision invalidating a portion of the Commission's environmental rule. See Natural Resources Defense Council, Inc. v. NRC, 547 F.2d 633 (D.C. Cir. 1976), cert granted, sub nom., Vermont Yankee Nuclear Corp. v. Natural Resources Defense Council, Inc., 429 U.S. 1090 (1977). See Record 523-1249.

The amicus' argument that NEPA requires the Commission to make the asked for waste disposal finding is also erroneous. California Energy Resources Conservation and Development Commission Brief, pp. 16-17. In a connected case to the

(Continued on following page)

claimed to be one below. Rather, it is a case about the meaning to be given the public health and safety requirements of the Atomic Energy Act. We think the Commission reasonably interpreted the Atomic Energy Act, and that accordingly the petition for review should be denied.

CONCLUSION

For the foregoing reasons the petition for review should be denied.

Respectfully submitted,

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34/ (Continued from preceding page)

one California relies on, Judge Richey made clear, as had the D.C. Circuit before him, that NEPA does not mandate particular substantive policies. Natural Resources Defense Council, Inc. v. SEC, 432 F. Supp. 1190, 1198 (D. D.C. 1977); Calvert Cliffs' Coordinating Committee, Inc. v. AEC, 449 F.2d 1109, 1112 (1971). Nor is it at all clear that a halt to nuclear power plant licensing until a waste disposal safety finding can be made would be an environmentally advantageous policy. The relative environmental advantages or disadvantages of fossil fuel is a matter of some controversy.

ADDENDUM

TITLE 42, UNITED STATES CODE

§ 2133. Commercial licenses—Conditions

(a) The Commission is authorized to issue licenses to persons applying therefor to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export under the terms of an agreement for cooperation arranged pursuant to section 2153 of this title, utilization or production facilities for industrial or commercial purposes. Such licenses shall be issued in accordance with the provisions of subchapter XV of this chapter and subject to such conditions as the Commission may by rule or regulation establish to effectuate the purposes and provisions of this chapter.

Nonexclusive basis

(b) The Commission shall issue such licenses on a nonexclusive basis to persons applying therefor (1) whose proposed activities will serve a useful purpose proportionate to the quantities of special nuclear material or source material to be utilized; (2) who are equipped to observe and who agree to observe such safety standards to protect health and to minimize danger to life or property as the Commission may by rule establish; and (3) who agree to make available to the Commission such technical information and data concerning activities under such licenses as the Commission may determine necessary to promote the common defense and security and to protect the health and safety of the public. All such information may be used by the Commission only for the purposes of the common defense and security and to protect the health and safety of the public.

License period

(c) Each such license shall be issued for a specified period, as determined by the Commission, depending on the type of activity to be licensed, but not exceeding forty years, and may be renewed upon the expiration of such period.

Limitations

(d) No license under this section may be given to any person for activities which are not under or within the jurisdiction of the United States, except for the export of production or utilization facili-

§ 2235. Construction permits

All applicants for licenses to construct or modify production or utilization facilities shall, if the application is otherwise acceptable to the Commission, be initially granted a construction permit. The construction permit shall state the earliest and latest dates for the completion of the construction or modification. Unless the construction or modification of the facility is completed by the completion date, the construction permit shall expire, and all rights thereunder be forfeited, unless upon good cause shown, the Commission extends the completion date. Upon the completion of the construction or modification of the facility, upon the filing of any additional information needed to bring the original application up to date, and upon finding that the facility authorized has been constructed and will operate in conformity with the application as amended and in conformity with the provisions of this chapter and of the rules and regulations of the Commission, and in the absence of any good cause being shown to the Commission why the granting of a license would not be in accordance with the provisions of this chapter, the Commission shall thereupon issue a license to the applicant. For all other purposes of this chapter, a construction permit is deemed to be a "license".

Aug. 1, 1946, c. 724, § 185, as added Aug. 30, 1954, c. 1073, § 1, 68 Stat. 955.

ties under terms of an agreement for cooperation arranged pursuant to section 2153 of this title, or except under the provisions of section 2139 of this title. No license may be issued to an alien or any any[1] corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. In any event, no license may be issued to any person within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public.

Aug. 1, 1946, c. 724, § 103, as added Aug. 30, 1954, c. 1073, § 1, 68 Stat. 936, and amended Aug. 6, 1956, c. 1015, §§ 12, 13, 70 Stat. 1071; Dec. 19, 1970, Pub.L. 91–560, § 4, 84 Stat. 1472.

[1] So in original.

§ 2232. License applications—Contents and form

(a) Each application for a license hereunder shall be in writing and shall specifically state such information as the Commission, by rule or regulation, may determine to be necessary to decide such of the technical and financial qualifications of the applicant, the character of the applicant, the citizenship of the applicant, or any other qualifications of the applicant as the Commission may deem appropriate for the license. In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public. Such technical specifications shall be a part of any license issued. The Commission may at any time after the filing of the original application, and before the expiration of the license, require further written statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee. Applications for, and statements made in connection with, licenses under sections 2133 and 2134 of this title shall be made under oath or affirmation. The Commission may require any other applications or statements to be made under oath or affirmation.

CERTIFICATE OF SERVICE

I hereby certify that on this 13th day of January, 1978, a copy of the foregoing "Brief for Respondents" was served upon counsel for all parties by placing a copy in the mail, postage prepaid, addressed to the following individuals:

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